Otto Bock®

QUALITY FOR LIFE

Dino® 3
Service Manual

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1 General Information

1.1 Preface

Regular maintenance is important. It increases safety and prolongs the service life of the product.

All Mobility products should be inspected and serviced once a year. If the product is used frequently, or if it is used by growing children or patients with changing clinical conditions, it should be readjusted and serviced every 6 months.

The service and maintenance described in this manual should be performed by skilled specialists only and not by the user. This service and maintenance manual refers to the spare parts catalogs and instructions for use manuals for the products described. For this reason, it is important to use these documents together. Use the maintenance plan (see section 4) as a template for making copies. Retain completed maintenance plans and provide the customer with a copy.

	Instructions for Use	Spare Parts Catalog
Dino 3	647H470	646K54

1.2 Symbol Legend

Caution!
Warning messages regarding possible risks of accident or injury.

Attention!
Warning messages regarding possible technical damages.

Note!
Information for service staff.

Note!
Please read the Instructions for Use first!

1.3 Warranty

- Use only original spare parts for all service and maintenance to maintain the warranty!
- Are you familiar with the functions of the product? If not, please read the Instructions for Use first! If you do not have them, you can order the Instructions for Use from Otto Bock or download them from our homepage at www.ottobock.de (German version) or **www.ottobock.com** (other languages).
- Clean and disinfect the product before starting inspection. Please observe the maintenance and cleaning instructions contained in the Instructions for Use!
- These service instructions will explain, among other things, how to dismantle individual components. For reassembly, please proceed in reverse order. If other or additional steps are required for reassembly, we will point out them separately in the corresponding section.

2 Safety Instructions

Caution!

Always wear adequate protective clothing (e.g. gloves, safety glasses, etc.) and use appropriate tools (refer to page 4)!

Caution!

You may get **injured** if the product tips over or falls off a work surface (e.g. workbench)!

Secure the product to prevent it from **tipping over or falling** off any work surfaces!

Caution!

Unsecured screw connections can become loose while using the product.

This can lead to accidents, resulting in a **risk of injury to the person being transported in the product**!

Always secure screws and nuts. If you have to undo secured screw fastenings, replace self-locking nuts and screws exclusively with new ones. To secure screws, you can also use a medium-strength liquid thread lock substance (such as Loctite 241 or Euro Lock A24.20).

Caution!

Bald tires can lead to accidents.

This results in a **risk of injuries for the person transported in the product!**

For this reason, wheels with solid material tires such as PU or EVA foam must be replaced if the material shows signs of cracking or damage, or when the tread becomes worn down to such an extent that there is only 5 mm of radius left on the outer edges of the tire.

For this reason, the casing of pneumatic tires must be replaced if it is bald or shows signs of cracking or other damage.

Caution!

Always observe the following guidelines:
- Times needed for adhesives to set,
- Torque indications for screw connections!

Non-compliance with these instructions can lead to malfunctioning of the product and accidents. In such cases, there is a **risk of injury to the person being transported in the product!**

3 Required Tools

The following photos show you the tools and auxiliaries mentioned in the text.

Reversible ratchet handle wrench and sockets, sizes 8 - 24 mm

Torque wrench, measurement range 8 Nm to 65 Nm

Wrenches, sizes 8 - 24 mm

Allen wrenches, sizes 4 - 6 mm

Screwdrivers, blade widths 2.5/3.5/5.5 mm

Phillips head screwdriver, size 2 mm

Plastic hammer

Hammer, approx. 300 g

Stanley knife with sickle hooked blade and standard blade

Water pump pliers DIN 8976, gripping width up to 32 mm

Side cutting pliers

Pop rivet gun for rivets up to Ø 5 mm

Pin punch,
Ø 3 mm, Ø 5 mm, Ø 8 mm

Hand drill

Twist drills,
Ø 4 mm, Ø 5.2 mm, 6 mm

PVC tube and wire loop (e.g. HR11590005 and HR11190031)

Tire mounting levers / inner tube repair kit (e.g. 481C08=ST010)

Liquid thread lock "medium strength"

Brush and standard grease

Washing-up liquid and water mixed at a ratio of 1:4 in a spray bottle

Workbench as well as a vise with plastic jaws or rubber insert (e.g. HR11290048)

Spray oil WD40

4 Maintenance Plan

Maintenance Plan for regular service		**Dino 3** Mobility Base for Seating Shells		Customer:			
Item	**Component (group)**	**Inspection** (check list)					
	Serial no.:	1.) Function / setting		2.) Damages / deformations		3.) Screw connections	
1	Frame	- Frame					
	Frame accessories	- Anti-tipper - Tip-assist					
2	Footrests	- Flip-up mechanism - Lower leg length setting - Angle adjustment					
	Footrest accessories	- Locking device for single-panel footrest - Heel band for individual footrests					
3	Seat	- Seat - Seat tilt - Back angle adjustment					
	Interface adapters	- Type "Parallel" - Type "Trapezoid" - Type "Ortho-Seat 2" - Type "Shape / Moss" - Type "Dräger" - Type "R82/Atoform" - Type "InterCo"					
	Seat accessories	- Adapter for pre-tilt of the seat					
4	Back / push handle	- Back - Height adjustment of the push handles/ push bar - Push handles - Rubber hand grips (strength) - Pushbar - Pushbar with ratchet joint					
	Back accessories	- Back guide for seating shell back					
5	Side panel	- Wheel cover - Clothing protector - Height adjustment of the armrests					
6	Caster	- Tires (wear) - Air pressure - Screw connection to the frame - Running behavior of the wheels - Swiveling of the caster forks					
7	Rear wheel	- Tires (wear) - Air pressure - Running behavior of the wheels - Spokes - Quick-release axles					
	Rear wheel accessories	- Spoke protectors					
8	Wheel lock	- Wheel lock - Reverse-roll lock					
	Wheel lock accessories	- Wheel lock lever extension					
9	Accessories	- Seating shell interface - Footrest at seating shell interface - Trapezoid adaption for seating shells					
	Do the settings of the mobility base comply with the user's requirements?						
Maintenance performed by:		on:					

5 DINO 3

5.1 Frame

Replacing the frame

In order to replace the frame, first remove all component groups and accessories which are connected to the frame.

- Anti-tipper (refer to section 5.1)
- Tip-assist (refer to section 5.1)
- Seat with back (refer to section 5.3)
- Side panels (refer to section 5.5)
- Casters (refer to section 5.6)
- Rear wheels (refer to section 5.7)
- Wheel locks (refer to section 5.8)

Replacing/Retrofitting the receiver tube for accessories

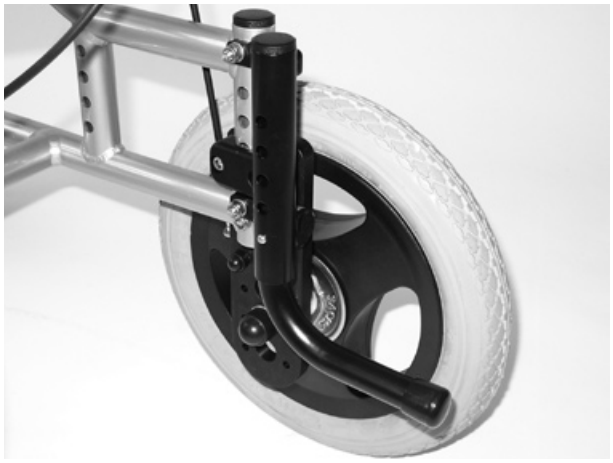
For the attachment of an anti-tipper or tip-assist to models equipped with 12" rear wheels, a receiver tube for accessories is required. Receiver tubes for accessories must be mounted *before mounting the wheel attachments*.

Screw the receiver tube for accessories to the frame's vertical end tube as shown in the photo.

Use new, self-locking nuts.

Replacing/Retrofitting/Setting an anti-tipper

READ: For mounting and setting the anti-tipper please observe the information given in the instructions for use manual and in the spare parts catalog.



Replacing/Retrofitting a tip-assist

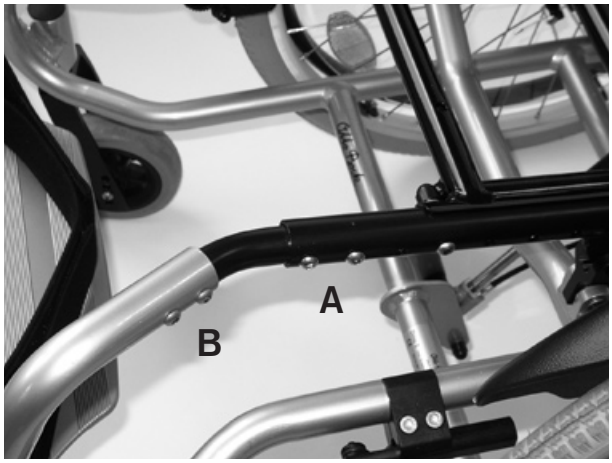
The tip-assist may be attached on the left or the right side.
With the spring button of the tripod spring pressed down insert the tip-assist from underneath into the receiver tube for accessories or into the frame's vertical end tube and let the tripod spring engage in the lowest bore hole.

5.2 Footrests

Replacing/Retrofitting the footrest assembly

All footrest assemblies are attached to the seat tube with the seat depth adjuster/holder.

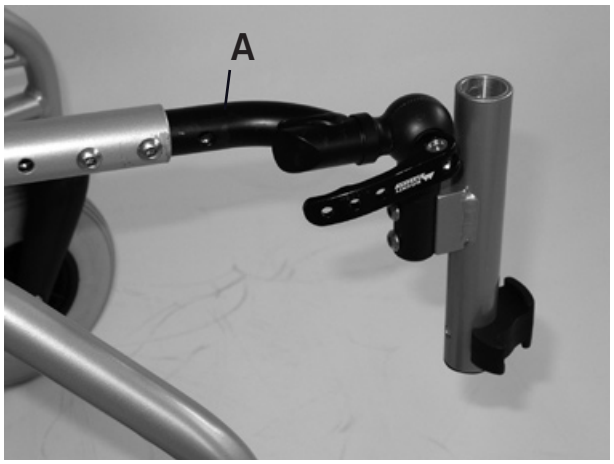
READ: For operation and setting please refer to the information given in the instructions for use manual.



Replacing/Setting the seat depth adjuster/holder

Loosen and remove the screw connections on the seat tube (A) and either change the seat depth setting or completely pull the tubes of the seat depth adjuster out of the seat tubes.

Next, loosen and remove the screw connection between the seat depth adjuster and footrest holder (B) and replace the seat depth adjuster.



Replacing/Retrofitting/Shifting the footrest receiver with angle adjustment

First remove the stopper plugs from the seat tube ends. Insert the footrest receiver into the seat bar and fasten the footrest receiver (A) with the four screws to the seat bar. The row of holes in the seat bar allows depth adjustment of the footrest receiver.

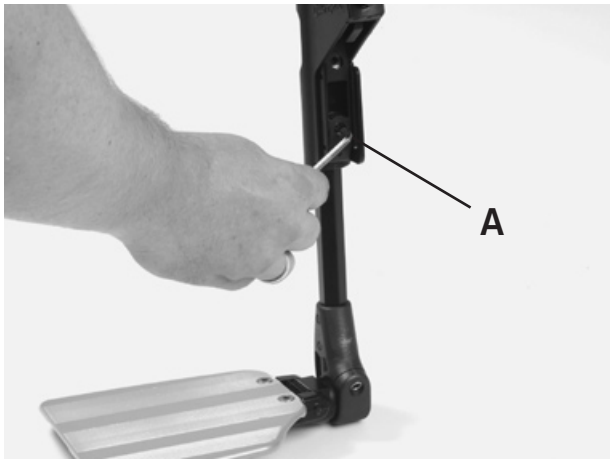
For disassembly, please proceed in reverse order. Use new screws with thread lock.

Replacing the footrest holder

Remove the calf band.

Undo the lock as shown in the photo, swing the footrest holder outwards and pull it upwards off the footrest receiver.

For reassembly, please proceed in reverse order.



Removing the footrest bar and footplate

Unscrew the Allen head screw (A) and pull the footrest bar with the mounted footplate out of the footrest holder.

For reassembly, please proceed in reverse order.

Replacing the lock piece (counterpart to the footrest holder)

Loosen and remove the screw and remove the lock piece.

For reassembly, please proceed in reverse order.

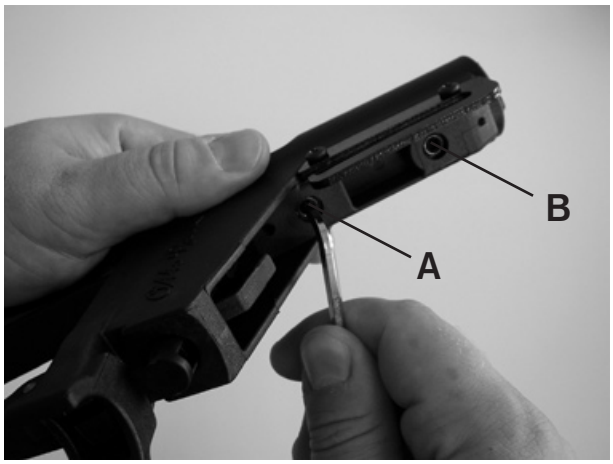
Use new screws coated with thread lock or apply a liquid thread lock to the existing screws (refer to section 3).

Replacing the pivot bearing (on the footrest holder)

Loosen and remove the screw and remove the pivot bearing.

For reassembly, please proceed in reverse order.

Use new screws coated with thread lock or apply a liquid thread lock to the existing screws (refer to section 3).

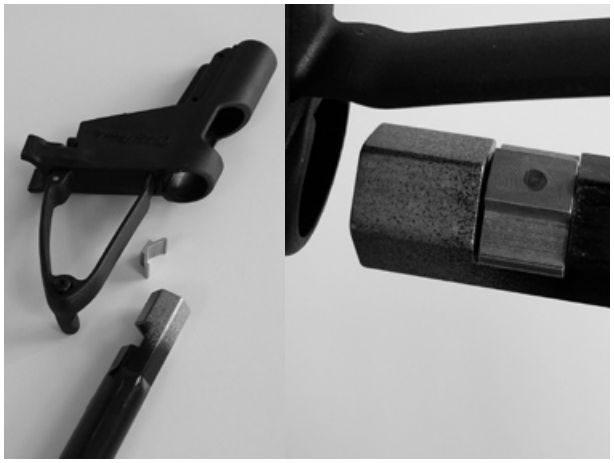


Replacing the swivel segment

Remove the footrest holder from the frame. Loosen the set screw (A) and pull the footrest bar out of the footrest holder. Loosen and remove the set screw (B).

Pull the frame tube of the footrest holder out of the swivel unit. Pay attention to the clamp piece which is only laid in.

For reassembly, please proceed in reverse order.



Before putting the parts together, lay the clamp piece into the opening of the frame tube as shown in the photo.

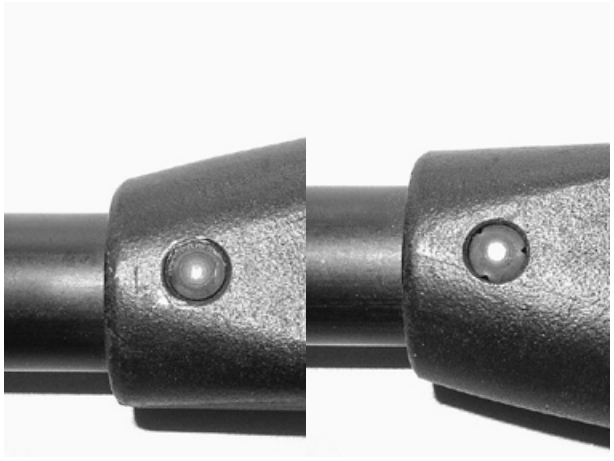
Use new set screws coated with thread lock or apply a liquid thread lock to the existing set screws (refer to section 3).

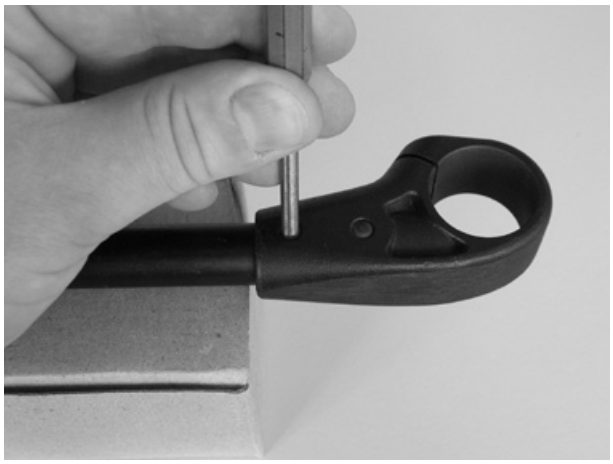
Replacing the footrest bar

First pull the footrest bars out of the footrest holders.

Undo the screw connection for the angle adjustment of the footplates and pull the receivers off the bearings.

For later reassembly, please proceed in reverse order.





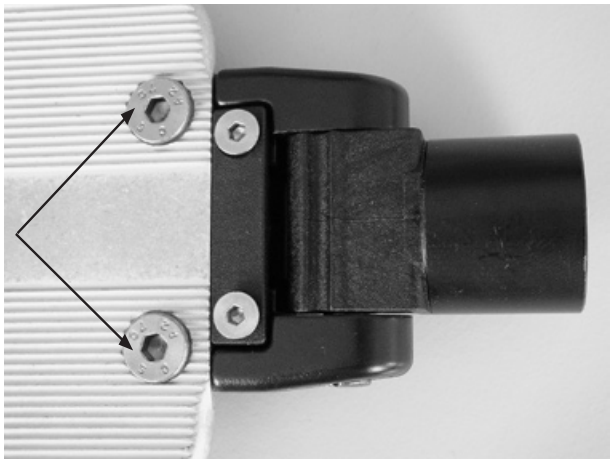
Hit the thin beginning (no notches) of the half length taper-grooved dowel pins using a pin punch (Ø 5 mm) to drive the pins out of the receivers and then pull the footrest bar out of the receiver.

Attention! Please pay attention to the tapered shape of the half length taper-grooved dowel pins. For driving out the pins hit the thin beginning of the pins; for driving in hit the thick end of the pins. The side with the notches (right photo) is the thick end of the pin. The side without notches is the thin beginning of the pin (left photo).

If you use the wrong direction for driving the pins in or out, you will enlarge the bore hole resulting in that the pins can fall out and no longer provide sufficient securing function.

Insert the new footrest bar into the receiver and fasten it with the dowel pins. Use a plastic hammer for driving in the dowel pins.

Ensure that the dowel pins are seated equally deep in the bore holes on both sides. If necessary, drive the dowel pin deeper into the hole using a pin punch (ø 5 mm).

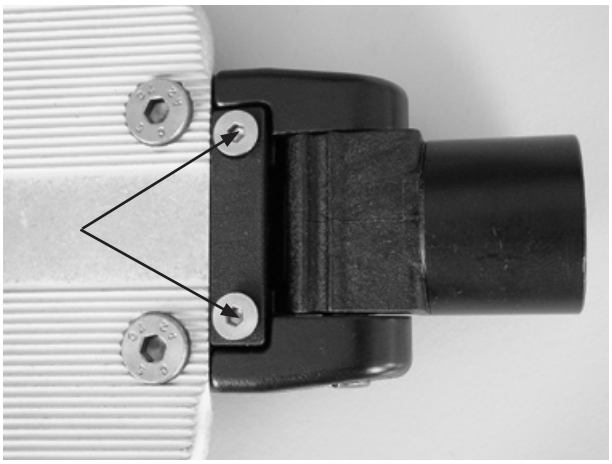


Replacing the footplates

Loosen and remove the screw connections on the sides of the footplate and remove the footplate from the bearing segments.

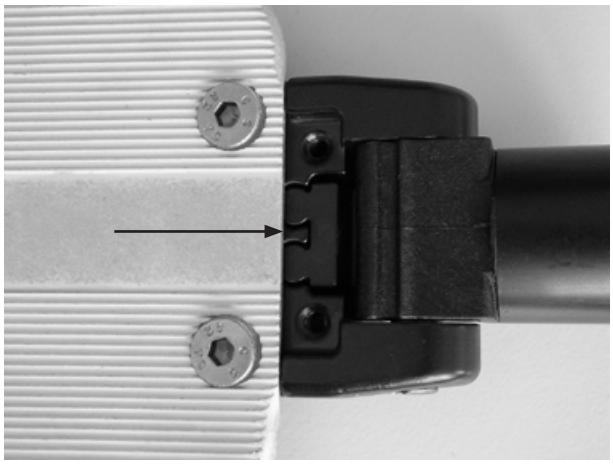
For reassembly, please proceed in reverse order.

Use new screws coated with thread lock or apply a liquid thread lock to the existing screws (refer to section 3).



Replacing the locking clip and the cover

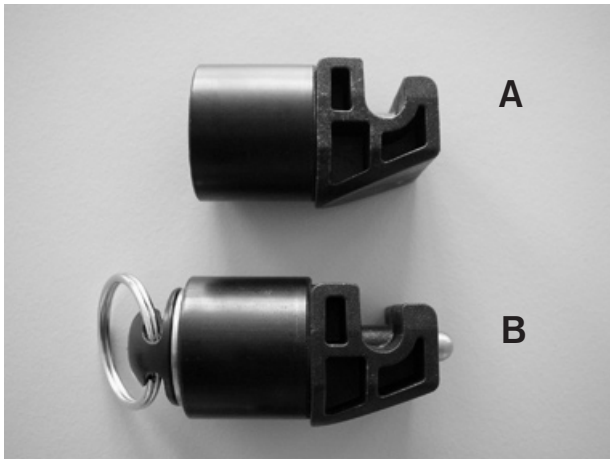
First loosen and remove the screw connections (arrowed) of the cover and remove the cover.



Take the locking clip out of the bearing segment and replace it with a new one.

In case of bearing segments up to size 2, the locking clip can only be removed after the screw connection of the footplate has been opened slightly.

Retighten the screw connection of the cover. Use new screws coated with thread lock or apply a liquid thread lock to the existing screws (refer to section 3).



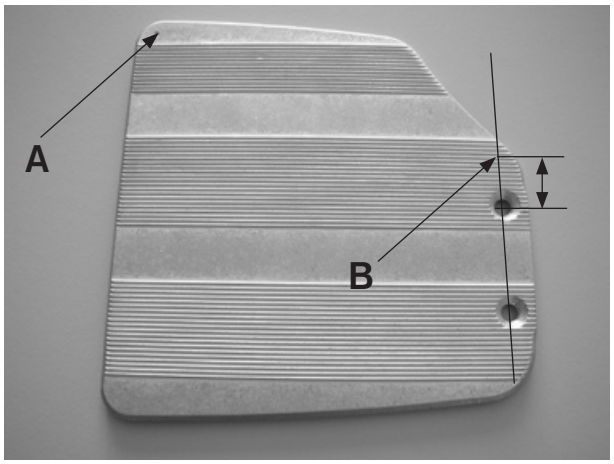
Retrofitting the locking device for single-panel footrest

Flip up the footplate of the single-panel footrest.

Undo the screw connection for the angle adjustment of the footplate.

Replace the standard bearing (A) with the bearing with locking device (B).

Fold down the footplate and let the support segment engage in the locking device. Now tighten the screw connection for the angle adjustment of the footplate.



Retrofitting heel bands for individual footrests

The footplates must first be provided with two bore holes each with a diameter of 5.2 mm.

The mounting hole on the rear edge of the footplate is center marked (A). The drill hole besides the footrest screw connection (B) should be 17 mm above the existing drill hole.

Fasten the heel band holders from underneath with the screws provided.

Attach the heel band halves to the holders and adapt the length to the patient's foot.

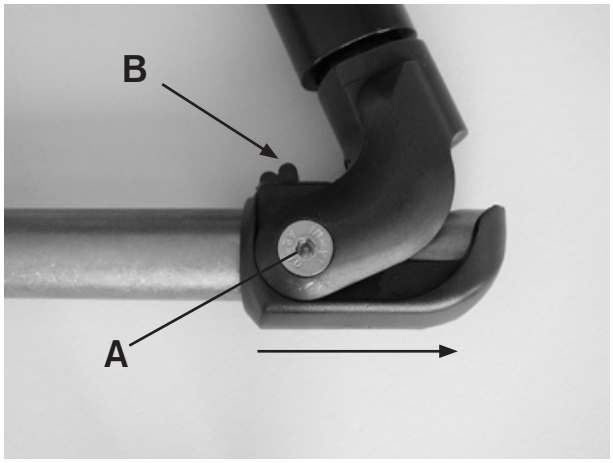
Cut off excessive strap ends using scissors.

Replacing footrest bar, footplate and spring element (models until 11/2003)

First pull the footrest bars out of the footrest holders.

Undo the screw connection for the angle adjustment of the footplates as shown in the photo and pull the footplate off the bearing.

For reassembly, please proceed in reverse order.



Loosen and remove the screw connection in the joints (A) and pull out the joint bolt.

Put aside the fork part and pull the cover off the footrest bar.

The cover (B) at the same time is the **spring element** that holds the footplate in flipped-up position.

For reassembly, please proceed in reverse order.

Models until 11/03:

In case of single-panel footrests one side is designed as receiver (fork part).

Open the screw connection for the angle adjustment of the footplate and pull the clamp out of the footplate.

Drive the half length taper-grooved dowel pin out of the receiver using a pin punch (Ø 4 mm) and pull out the footrest bar.

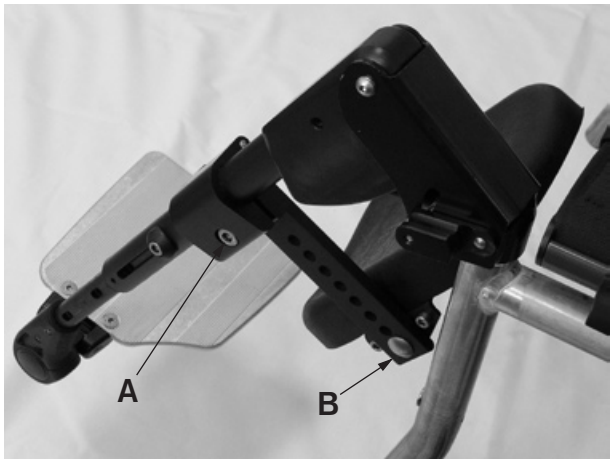
For reassembly, please proceed in reverse order.

Setting the lower leg length/Replacing the footrest bar in case of elevating footrests

Loosen the screw (arrowed) to adjust the footrest bar in length.

To replace the footrest bar loosen and remove the screw (arrowed) and completely pull out the footrest bar.

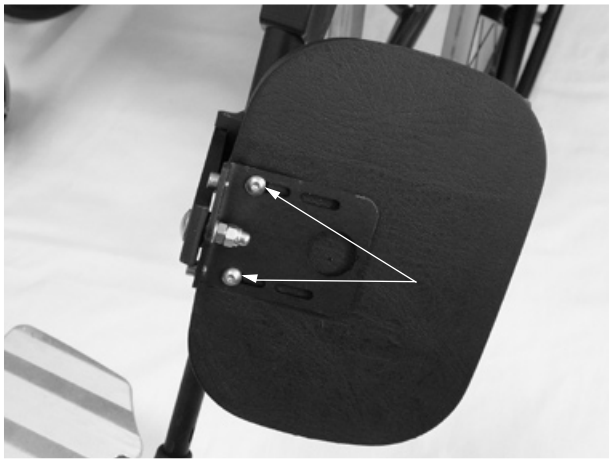
For reassembly, please proceed in reverse order.



Setting or replacing the calf pads of the elevating footrests

After loosening the screw (A) in the clamping unit the calf pad can be adjusted in height.
After loosening and removing the screw connection (B) the calf pad can be adjusted in depth along the row of holes.

For reassembly, snugly retighten the screw connections.



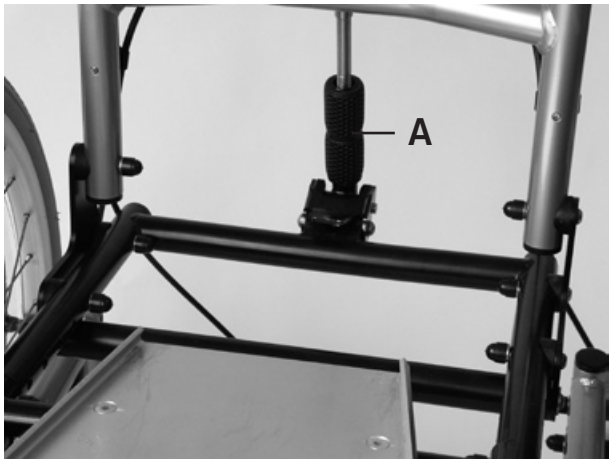
Replacing the calf pad

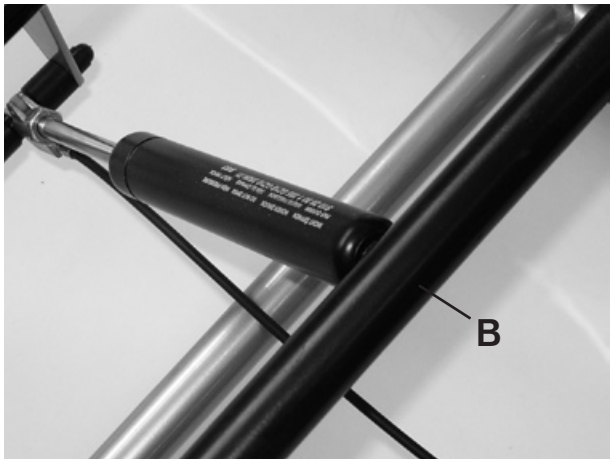
Loosen and remove the screw and remove the calf pad.

For reassembly, please proceed in reverse order.

The slotted holes in the calf pad retainer plate allow for sideways adjustments of the calf pad.

5.3 Seat





Replacing the seat

Open the quick-release lock of the back angle adjustment (A) and fold the back down onto the seat.

Disassemble the back (refer to section 5.4) and the footrest assemblies (refer to section 5.2).

Manually unscrew the gas comression spring from the cross tube (B) and slowly put down the seat tilt mechanism and seat.

Loosen and remove the screw connection (A) between the seat and frame.

Carefully push out the bushings using a pin punch.

For reassembly, please proceed in reverse order.

Use new, self-locking nuts.

Retrofitting the adapters for pre-tilt of the seat

First loosen and remove the screw connection between the seat and frame.

Then screw the adapters to the frame and firmly tighten the set screws.

Next, screw the seat to the adapters.

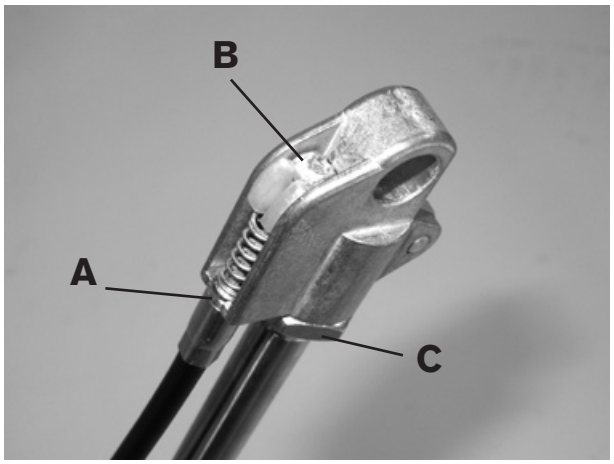
Replacing the seat tilt mechanism

Manually unscrew the gas comression spring from the cross tube and slowly put down the seat tilt mechanism and seat.

Loosen and remove the screw connection between the release head and the frame.

For reassembly, please proceed in reverse order.

Use new, self-locking nuts.



Replacing the release head

Carefully lever the cable (A) out of the receiver on the release head using a screwdriver and release the cable end (B) from the release lever. Insert a screwdriver through the bore hole in the release head and loosen the lock nut (C).

Completely unscrew the release head from the piston of the gas compression spring.

For reassembly, please proceed in reverse order.

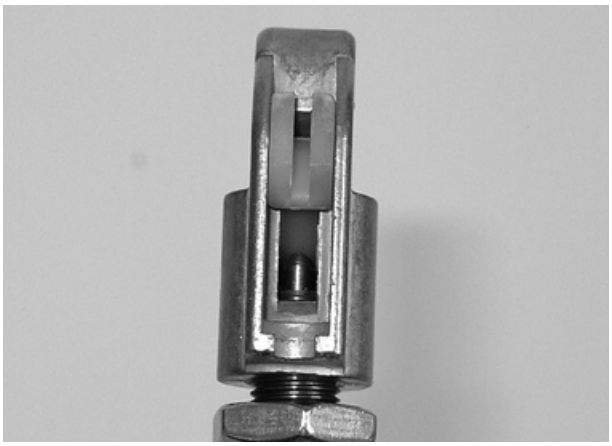
Replacing the bowden cable (sheathed cable)

Release the cable from the release head (refer to 'Replacing the release head').

Loosen the screw connection of the cable holder until you can release the cable.

Release the cable from the release lever.

For reassembly, please proceed in reverse order.



Setting the release head

For reassembly of the release head, screw the piston of the gas compression spring into the release head until the release pin contacts the release lever. Screw up the lock nut until it is in contact with the release head but do not tighten it any further.

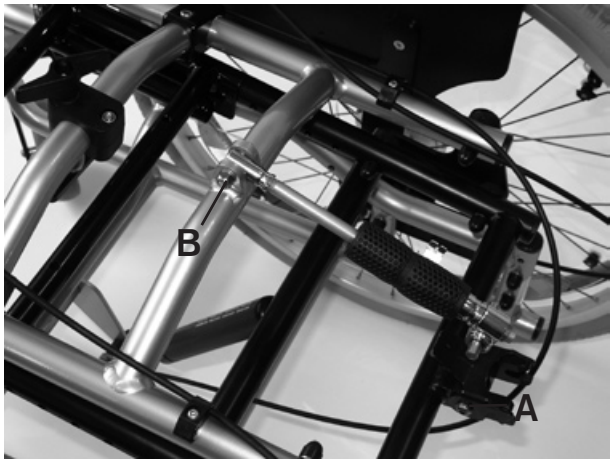
Reassemble the gas compression spring and relocate the cable in the release head.

Attention!
Take care not to scratch the piston, since this would make it unusable. Protect the piston with leather or with a piece of PVC flexible tubing.

Setting:
To decelerate the release function unscrew the piston rod from the release head a bit. To accelerate the release function screw in the piston rod. Finally tighten the lock nuts against the release heads. Use a liquid thread lock substance.

Setting the back angle with fixed adjustment segment

READ: Please observe the information given in the instructions for use manual.



Retrofitting the back angle adjustment with loop spring mechanism

Open the quick-release lock of the back angle adjustment (A) and fold the back down onto the seat.

Loosen and remove the screw connection between the angle adjustment mechanism and back frame (B) and remove the adjustment segment.

Now screw the back angle adjustment with loop spring mechanism to the back frame.

Mount the release lever to the free side of the push handle/pushbar.

Hang the cable into the release lever.

Loosen the screw connection of the cable holder until you can hang in the cable.

Insert the cable through the barrel-shaped guide of the loop spring mechanism and thread on the compression spring between the two arms of the loop spring mechanism.

Move the clamp piece on the inner cable up to the release arm and tighten the clamp.

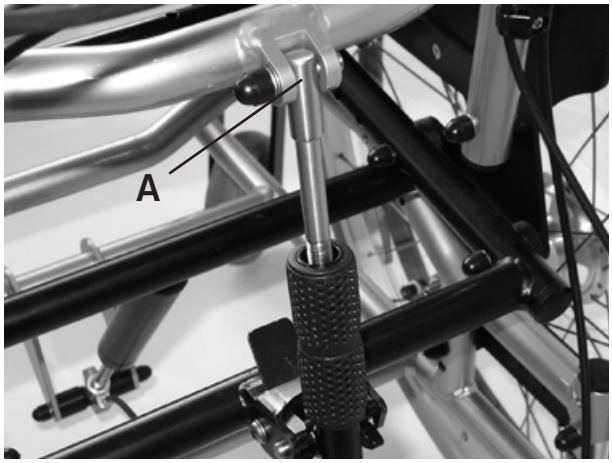
Cut off the excessive inner cable length to approx. 3 cm.

Put the cable end sleeve onto the end of the inner cable and carefully clamp it.

Replacing/Shifting the interface adapter

Please observe the information given in the instructions for use manual.

5.4 Back / Push Handle



Replacing the back

Loosen and remove the screw connection between the back angle adjustment mechanism and the back frame (A) and fold the back down onto the seat.

Loosen and remove the screw connection between the back and the side plates on the seat.

Loosen and remove the cable holders.

Note: These screws hold the wire loops that secure the push handles/pushbar.

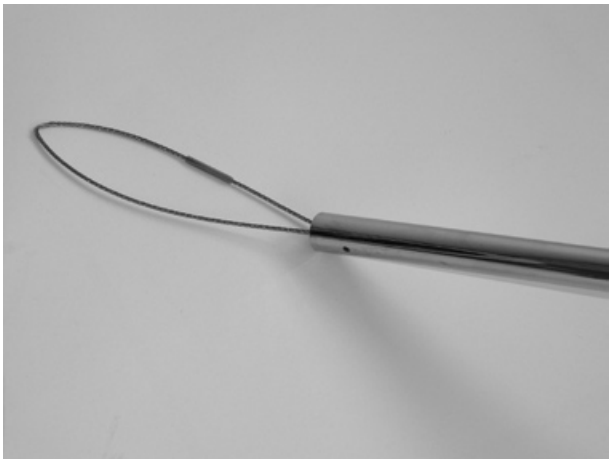
Open the adjustment levers of the height adjustment on the left and right side of the back frame and pull the push handles/pushbar out of the back frame.

For reassembly, please proceed in reverse order. Use new, self-locking nuts.

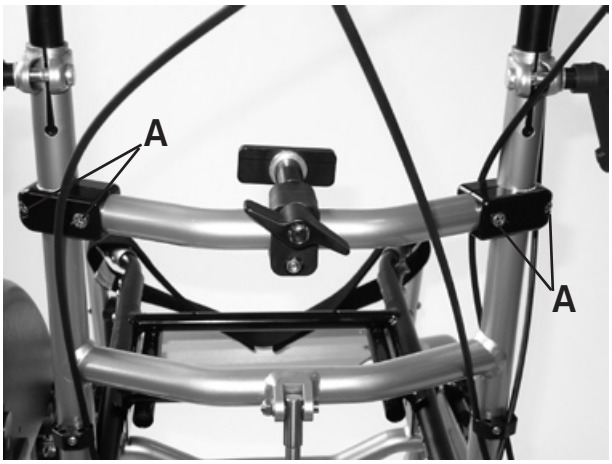
Replacing/Retrofitting push handles and pushbar

First disassemble the brake handles and release levers. Then open the clamping levers on the left and right side of the back frame.
Loosen and remove the cable holders to free the loops of the pull cable.
Pull the push handles/pushbar out of the back frame.

For reassembly, please proceed in reverse order.



Caution!
If the wire loops which secure the push handles/pushbar are not captured by the screws, the push handles/pushbar can slip out. This can lead to a fall that could injure the user. Therefore, when reassembling, please ensure that the loops of the pull cable are captured by the screws and that the push handles/ pushbar can no longer be pulled out of the back frame.



Replacing/Setting the adjustable back tube

First loosen the screw connections in the half-shells (A). Now you can move the back tube to another height.

Remove the screw connections to replace the half shells and the back tube.

Replacing the rubber hand grips on push handles

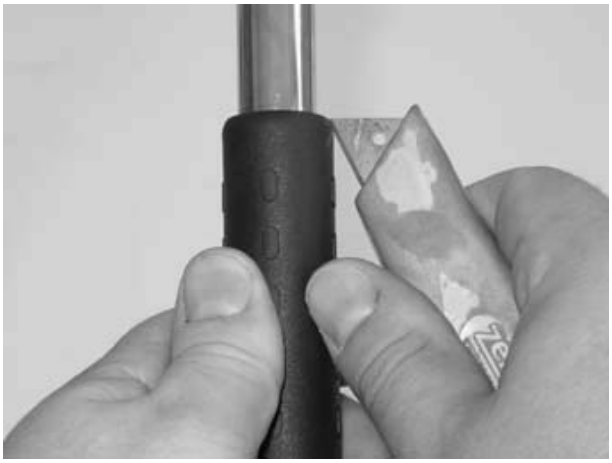
READ: Please observe the information given in the instructions manual 647G244 inlcuded with the HR32042490 Replacement Set.

Replacing the rubber hand grips on the pushbars

First disassemble the brake handles and release levers.

Loosen and remove the screw connections between the ratchet joint/adjustment tube and the pushbar tube bend and pull off the tube bend.

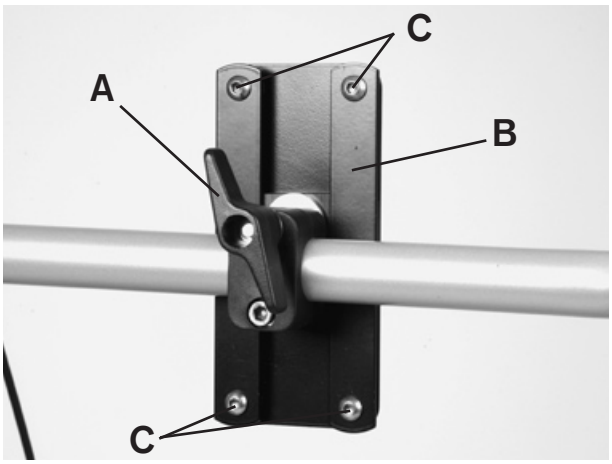
For reassembly, please proceed in reverse order.



Carefully cut the grip covers off the pushbar tube bend using a blade.
Cut on the inner side of the tube bend, since there is the risk of leaving scratches how ever careful you may be.

Clamp the pushbar tube bend into a vise.
Spray the mixture of washing-up liquid and water into the new rubber hand grip and pull it onto the pushbar.

Reassemble the pushbar.



Retrofitting a back guide

Turn the attachment block of the back guide with the wing nut (A) to the right until it is parallel in the slot. Now separate the attachment block from the guide plate (B).

Attach the guide plate with screws to the outside of the seating shell. Use the provided screws (C) for this or replace them with longer ones if necessary.

Note: The package includes longer screws and spacers for mounting of the attachment block.

Hold the attachment block and unscrew the wing nut counter-clockwise. Now you can individually change the distance between the back guide and the seating shell back.

NOTE: Always turn the connection clockwise for opening and closing to prevent the wing nut from unscrewing.

5.5 Side Panel

Retrofitting the clothing protector 471E42=PK025

Remove the rear wheels (22"/24").
Disassemble the drum brake from the rear wheel adapter (refer to section 5.7).

Disassemble the rotation protection of the drum brake and replace it with the clothing protector holder.

Finally reassemble the drum brake to the rear wheel adapter.

Replacing / Setting the plastic part of the clothing protector

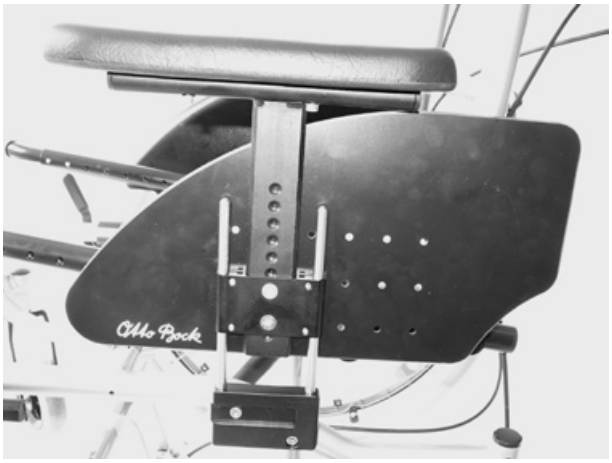
Loosen and remove the two screw connections which connect the plastic part to the holder and replace the plastic part.

The two pairs of holes are intended to match 22" or 24" rear wheels respectively.

Retrofitting the clothing protector 471E42=PK010

Remove the rear wheels (22"/24").

Mount the clothing protector holders as shown in the photo on the left and right side of the frame.



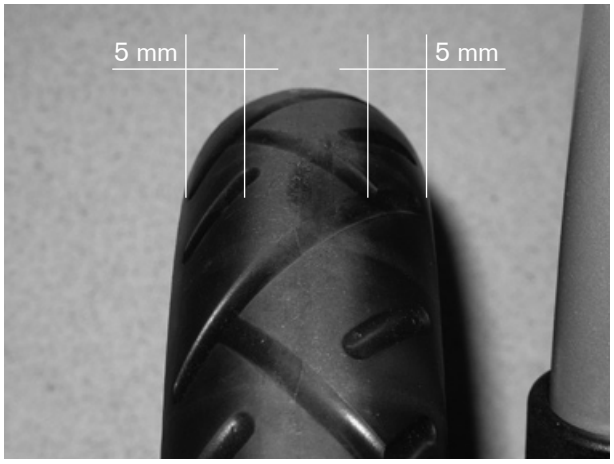
Setting the plastic part and the armrests

After loosening and removing the screw connections in the middle of the clamping plate, the row of holes can be used for changing the armrest height setting.

After loosening and removing the four outer screws in the clamping plate, the rows of holes can be used for changing the depth and height setting of the plastic part.

After loosening the four outer screws the bolts can be moved in the clamping plate and thus the height of the clothing protector adjusted.

5.6 Caster



Caution!
Bald tires can lead to accidents. This results in a **risk of injuries for the person transported in the product**! For this reason, wheels with solid material tires such as PU or EVA foam must be replaced if the material shows signs of cracking or damage, or when the tread becomes worn down to such an extent that there is only 5 mm of radius left on the outer edges of the tire. For this reason, the casing of pneumatic tires must be replaced if it is bald or shows signs of cracking or other damage.

Replacing/Changing the position of the front wheels

Loosen and remove the screw connection and take the front wheel out of the caster fork.

Note: The front wheel can be set to one of four heights.

For reassembly, please proceed in reverse order. Use new, self-locking nuts. Tighten the screws with a torque of **10 Nm (7.4 lbf.ft./88.5 lbf.in.)**.

Replacing the casing or inner tube

First let the air out of the tire. Using plastic tire levers, insert them under the wall of the tire and lever it over the wheel rim. Continue all the way around the tire wall until it is fully off the wheel rim. Pull the inner tube out of the tire and repair it with a standard bicycle repair kit or replace the tube with a new one.

For reassembly, please proceed in reverse order.

Fill the inner tube with a small amount of air before mounting in order to avoid damages and pinching.

Tire pressure:

Always ensure that all tires are fully inflated to the maximum pressure indicated on the sidewall of the tire.

Replacing the caster fork

Loosen and remove the nut at the upper end of the threaded axle and remove the caster fork from the frame.

Loosen and remove the nut below the caster fork and replace the fork.

For reassembly, please proceed in reverse order.

Use new, self-locking nuts.

Tighten the nuts on the caster fork with a **torque** of **30 Nm (22 lbf.ft./265.5 lbf.in.)**.

Adjusting the caster forks

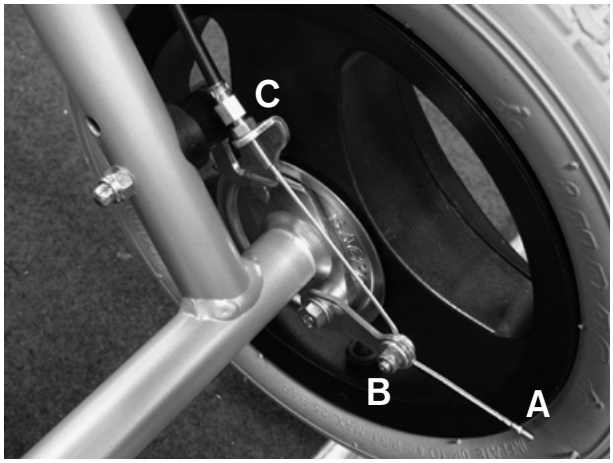
Tighten the nut above the ball bearing only so the caster fork can still rotate freely but does not allow for lateral play.

READ: Please observe the information given in the instructions for use manual.

5.7 Rear Wheel

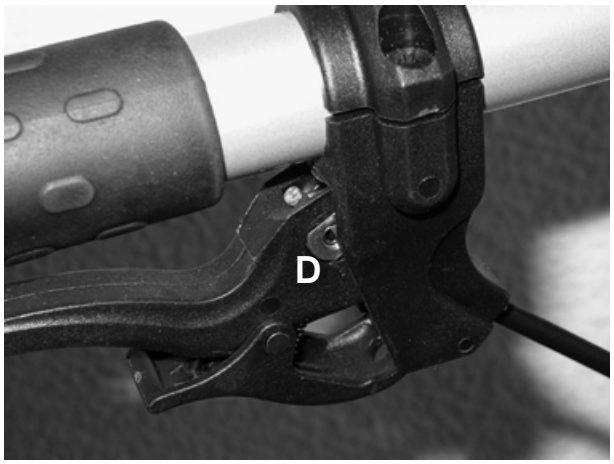
Removing rear wheels with quick-release axles/Maintenance of pneumatic tires

READ: Please observe the information given in the instructions for use manual.



Replacing the inner cable

Cut off the cable end crimp (A) using side cutting pliers. Undo the adjustment die (B) and pull the inner cable out of the adjustment screw (C).
Pull the brake handle up fully to the stop.
Undo the set screw in the brass insert (D). Next, using pliers grip the nipple of the inner cable and pull it through the brake lever.
For reassembly, please proceed in reverse order.



Setting the drum brakes

The brake force must be checked from time to time and readjusted if need be.

Uncrew the adjustment screw (C) to increase the tension and thereby the brake force. Adjust the brake so that no rotation of the rear wheels is possible with the brake lever pulled fully up and secured using the locking lever and that the wheels run freely when the brake lever is released.

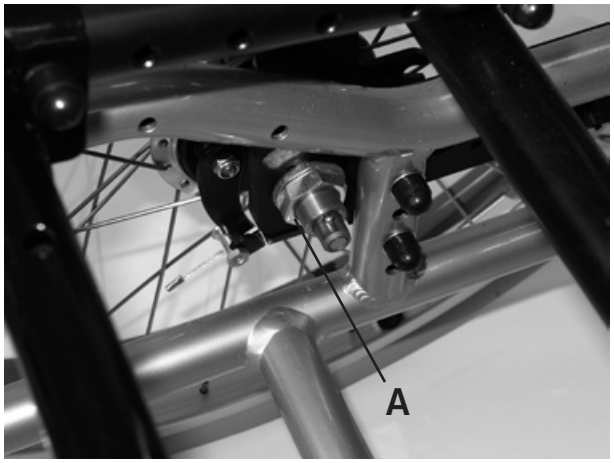
Finally secure the adjustment screw (C) with the lock nut.

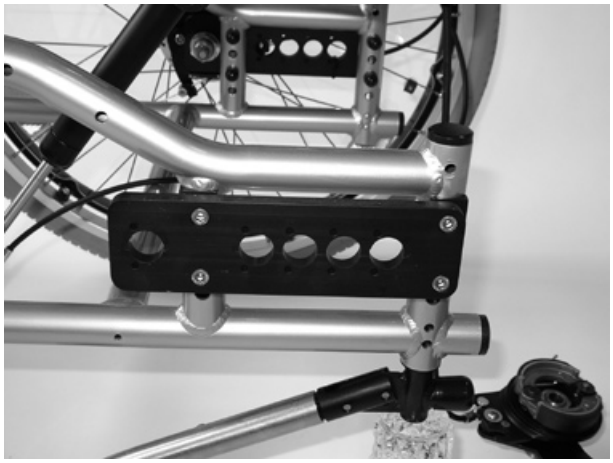
Setting the quick-release axle

The quick-release axle should be set so the wheel is fully engaged but has the minimum amount of lateral axle play:

Using a wrench hold the inner end of the axle still, whilst the outer nut of the axle is adjusted so as to give the correct lateral axle distance.

Regularly clean the quick-release axle and lubricate with spray oil.





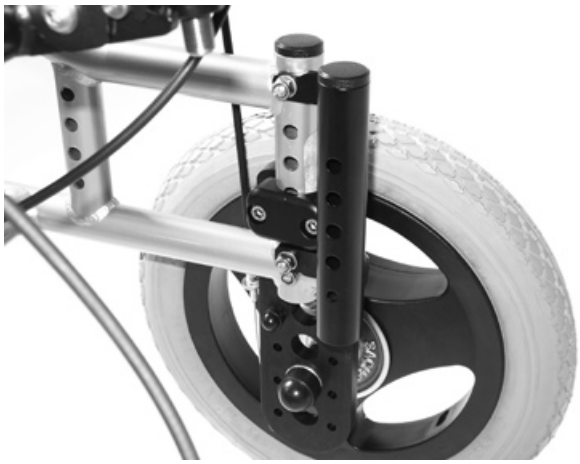
Replacing/Changing the position of the rear wheels (22"/24")

Remove the rear wheels with the quick-release axle from the frame. Loosen and remove the nut from the inside of the fitting (A) and pull the drum brake off the rear wheel.

For reassembly, please proceed in reverse order. Tighten the nuts on the fitting with a **torque** of **30 Nm (22 lbf.ft./265.5 lbf.in.)**.

Now you can change the position of the drum brakes on the rear wheel adapter.

The rear wheel adapter can be set in one of two height positions. Rear wheel adapters with 0° and 2.5° camber and as long version for wheelbase extension or reduction are available.



Retrofitting 12" rear wheels

Remove the rear wheels and rear wheel adapters and mount the wheel attachment device to the frame as shown in the photo.

The row of holes allows for height adjustment of the 12" wheel.

Note: Receiver tubes for accessories must be mounted before mounting the wheel attachment.

Checking and retightening the spokes

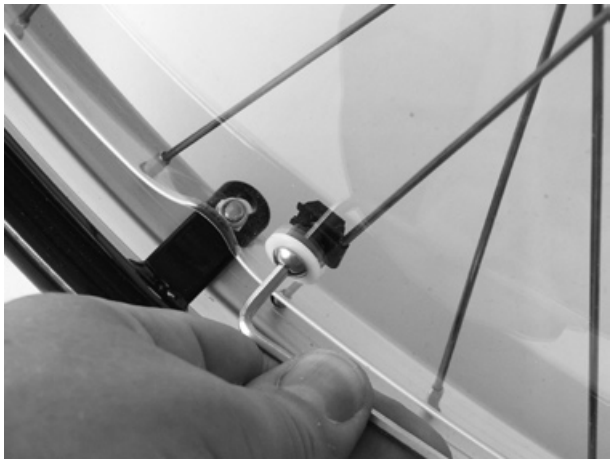
Attention!
Adjustment of the radial excursion requires special devices and expertise. Please have the adjustment carried out by a bicycle workshop.

Check to see if spokes are broken and that they are still tight by trying to move them.

Replacing the push rings and setting the mounting position

Completely remove the tire.
Loosen and remove the screw connection of the push rings with the rim. Now mount the push rings in the narrow or wide mounting position in relation to the rim.

READ: For mounting the tires please refer to "Maintenance of pneumatic tires" in the instructions for use manual.



Retrofitting a spoke protector

The spoke protectors are attached to the spokes with six screw connections (retainer nuts).

5.8 Wheel Lock

Setting/Replacing the wheel lock

After loosening the two screws the distance between the wheel lock and rear wheels can be changed. Remove the two screws in order to remove the wheel lock.

Tighten the screw connection on the wheel lock with a torque of **15 Nm (11 lbf.ft./132.8 lbf.in.)**.

READ: For setting the wheel lock, please observe the information given in the instructions for use manual and observe the correct distance to the rear wheel.

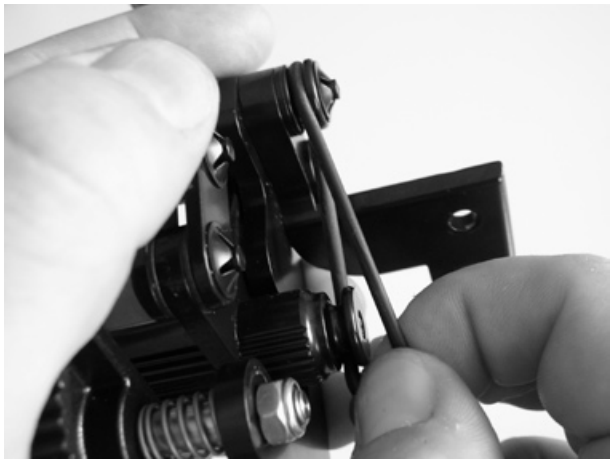
Retrofitting the (plug-on) wheel lock lever extension

Cut open the wheel lock lever handle cover and peel it off the wheel lock lever.

Caution! The user can get injured by the brake block. When making settings on the distance between rear wheel and side panel or when changing the wheel camber, ensure that the brake block is in the correct position. With a protruding brake block there is the risk for the user to get their hands injured. The brake block should reach over the wheel up to at least 3/4 of the tread width, but not beyond the wheel. In the spare parts catalog you can choose among brake block of different length.

Replace the cap screw (A) with the longer cap screw provided.

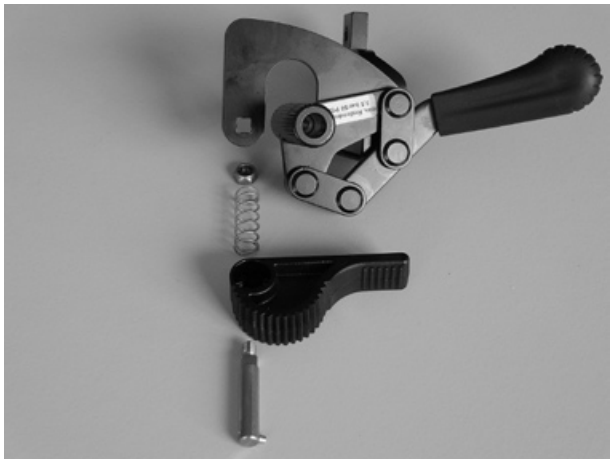
Plug the wheel lock lever extension onto the wheel lock lever and screw the cord to the thread end that protrudes from the clamp attachment.



Replacing the O-rings

Replace worn out or porous O-rings.

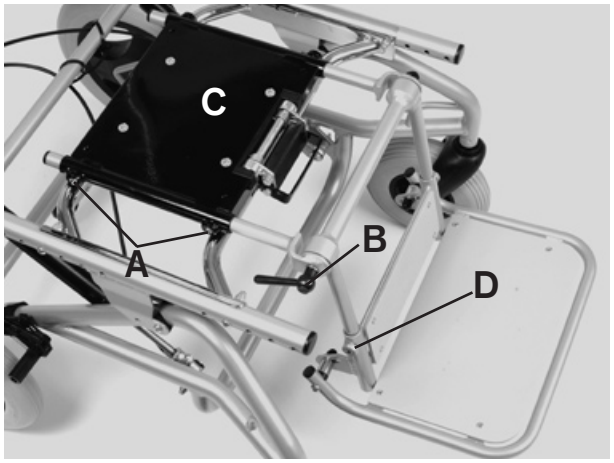
Stretch and apply the new O-ring as shown here from the abutment to the brake block.



Replacing the reverse-roll lock

First loosen and remove the nut from the bolt on which the reverse-roll lock is seated. Then pull the bolt out of the holding plate. Replace the plastic serrated element of the reverse-roll lock and, if necessary, the compression spring.
Insert the bolt into the new plastic element, thread on the compression spring and insert the bolt with the square neck into the holding plate, so that the half-length taper-grooved dowel pin in the mounted wheel lock points in forward direction.
Firmly retighten the screw connection.

5.9 Accessories

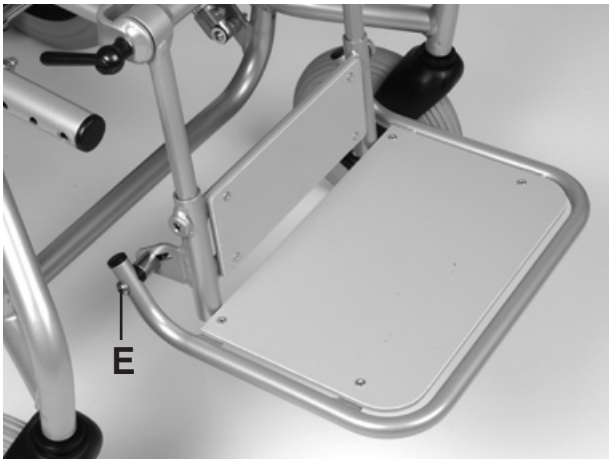


Replacing/Retrofitting/Adjusting the knee angle

Loosen the set screws (A) on the seating shell interface (C) and pull out the knee angle (B). Now change the depth position.

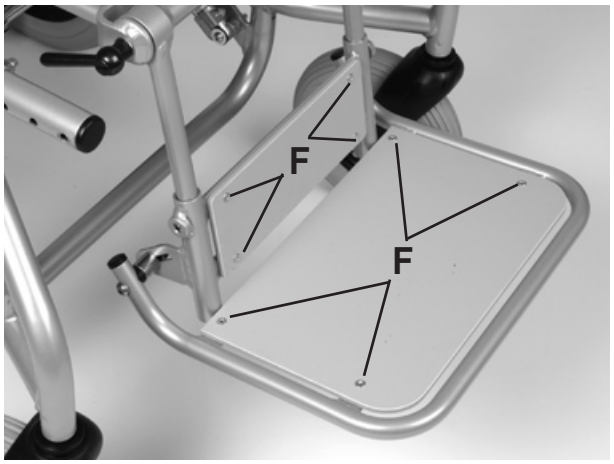
Loosen the set screws (D) on the footrest. Slide the footrest off the tubes or up and down to adjust the position.

For reassembly, please proceed in reverse order.



Setting the footplate angle/Replacing the footplate

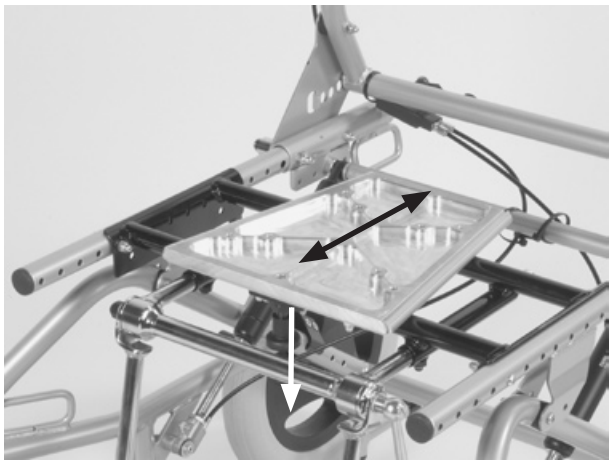
Loosen the screw connection between footrest slide and footplate (E). Now adjust the footplate angle in the guiding slot or remove the screw connection to replace the fooplate or slide.



Replacing the heel plate/footplate support

The heel plate and footplate support are secured with four rivets (F) each.

Drill the rivets from the head side using a drill bit (Ø 5 mm) until the head comes loose. Then drive the rivets through the receivers using a pin punch (Ø 3 mm). Fasten the new plates with rivets.



Trapezoid adapter for seating shells

READ: Please observe the information given in the instructions for use manual.

Hersteller/Manufacturer:

Otto Bock HealthCare GmbH

Max-Näder-Straße 15 · 37115 Duderstadt/Germany

National: Telefon (0 55 27) 848 1461/1462/1463 · Fax 05527-848-14 60

International: Phone +49-5527-848-1304/1562/1590/1594/3663 · Fax +49-5527-848-1676

e-mail: reha@ottobock.de · Internet: http://www.ottobock.com

Versandanschrift für Rücksendungen/Address for Returns

Otto Bock HealthCare GmbH

Lindenstraße 13 · 07426 Königsee/Germany

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